



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,297	09/12/2003	Gyoun-Yon Cho	0001469USU/2242	7445

7590 03/19/2007  
Charles N.J. Ruggiero, Esq.  
Ohlandt, Greeley, Ruggiero & Perle, L.L.P.  
One Landmark Square, 10th Floor  
Stamford, CT 06901-2682

EXAMINER
----------

PANWALKAR, VINEETA S

ART UNIT	PAPER NUMBER
----------	--------------

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/661,297	<b>Applicant(s)</b> CHO, GYOUN-YON	
	<b>Examiner</b> Vineeta S. Panwalkar	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                                   |                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                              | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/23/04</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The Information disclosure statement (IDS) submitted 01/23/04 has been considered. However, it is suggested that a copy of the "Y" reference Gyuon-Cho et al. " On efficient compression algorithm of the voice traffic" cited in the European search report (listed on the IDS) be submitted because it is known to the applicant that the said reference is prior art. See MPEP § 704.12.

### ***Specification***

2. The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Kandefer et al. (US 5153913), hereinafter, Kandefer.
- 3a. Regarding claim 1, it is pointed out that a preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). Thus, the part of the preamble "in mobile terminals" has not been given patentable weight, as it does not breathe any life into the claim.
- Kandefer discloses a method of compressing sounds (Column 3, lines 43-50) comprising:
- initializing differential code corresponding to difference between adjacent PCM codes among PCM codes generated by sampling input sounds, in a dictionary table; sequentially reading PCM codes generated by sampling actually inputted input sounds, transforming the PCM codes into corresponding differential codes initialized in the dictionary table, and outputting the differential codes; ( See column 2, lines 9-13; column 3, lines 60-63; column 6, lines 29-36. Input waveform (claimed input sounds) is sampled periodically and pulse code modulated (thereby producing PCM codes, as claimed). An adaptive differential pulse code (claimed differential

codes) modulation is used to compress the PCM data samples. This is done by storing an encoded differential between the values of adjacent PCM samples. Thus, a differential code corresponding to the difference between adjacent PCM codes among PCM codes is stored, as claimed (See column 9, lines 33-35. The ADPCM code is stored in the diphone library which is interpreted as claimed dictionary table). Column 3, lines 43-50. Thus the ADPCM is used to compress PCM data samples. This process goes through all the steps, including initialization (See column 6, line 35-column 8, line 14)); and

- registering the outputted differential codes in a dictionary through dictionary generation algorithm (See column 9, lines 33-35. The ADPCM code is stored in the diphone library, interpreted as claimed registering. See Fig. 7 and column 4, lines 53-55; column 8, line 59 – column 9, line 35. The generation of the diphone library is interpreted as claimed dictionary generation algorithm).

3b. Regarding claim 3, Kandefer further shows the method, wherein said sequentially reading the PCM codes, transforming the PCM codes into differential codes, and outputting the differential codes comprises:

- producing differential code variables that are differences between previously read PCM code and presently read PCM code (Column 6, lines 29-65. The code variables are  $d_n$ ); and

Art Unit: 2611

- differently outputting differential codes according to the produced differential code variables' values (Column 6, line 35- column 7, line 47. The quantization value adapts to the characteristic of the input waveform. The ADPCM code value (claimed differential code) is then determined by comparing the magnitude of the PCM code value differential (the code variable) to the quantization. In column 7, lines 20-43, Kandefer explains how the differential code is determined differently, according to the values of the variables).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kandefer.

4a. Regarding claim 2, Kandefer the method, wherein:

- the differential codes are 4-bit differential codes and the number of the differential codes is "n", in initializing the differential codes in the dictionary table. (Column 6, lines 22-28 and column 10, line 66 – column 11, line 15.)

Thus, Kandefer shows all the limitations claimed, but fails to explicitly disclose the exact number of bits and the exact number of differential codes claimed.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have a 6-bit differential code and have a total of 64 differential codes (as claimed), instead of the 4-bit code and a total of "n" codes shown by Kandefer in order to improve accuracy.

***Allowable Subject Matter***

5. Claims 4, 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

- 5a. Regarding claim 4, prior art of record fails to show the differently outputting differential codes according to the produced differential code variables' values, wherein the differential code variables are outputted as they are when the produced differential code variables' values are in a certain range, and the differential code variables are transformed and outputted when the produced differential code variables' values are not in the certain range, in combination with each and every other limitation of the base claim.
- 5b. Claims 5 and 6 are allowable as being dependent on claim 4.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:
- Petr (US 4437087) shows adaptive differential PCM coding.
  - Okada (US 6018520) shows sound compression in mobile terminals using PCM and ADPCM.
  - Tabeta (US 6085079) shows voice compression in a mobile terminal using ADPCM codec.

***Contact Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vineeta S. Panwalkar whose telephone number is 571-272-8561. The examiner can normally be reached on M-F 8:30-5:00.
- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

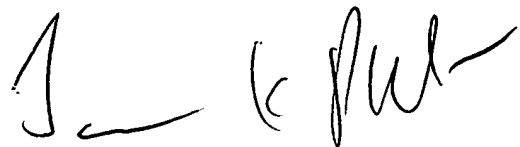
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR



Art Unit: 2611

only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VP

A handwritten signature in black ink, appearing to read 'J. K. Patel', is written over the printed name.

JAY K. PATEL  
SUPERVISORY PATENT EXAMINER